

Amendments to the Claims

This listing of claims replaces without prejudice all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-27 (Cancelled).

28. (Previously Presented) An inspection lamp having:

a. two or more light emitting diodes which produce radiation suitable for causing visible fluorescence of fluorescent materials,

b. a plurality of lenses, a lens of the plurality of lenses forward from each of said light emitting diodes to collimate the radiation from each light emitting diode into a beam,

such that each beam of radiation individually associated with each of said light emitting diodes projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the light emitting diodes merge together,

wherein the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses, and

wherein the individual beams have an angular diameter greater than any angle between any two axes of said beams, such that some area can be illuminated by all said beams at any distance from the lenses greater than distance from the lenses to the point at which the beam axes intersect.

29. (Previously Presented) An inspection lamp as set forth in claim 28 where the lenses are comprised by a single piece of suitable transparent material.

30. (Previously Presented) An inspection lamp having:

a. two or more light emitting diodes which produce radiation suitable for causing visible fluorescence of fluorescent materials,

b. a plurality of lenses, a lens of the plurality of lenses forward from each of said light emitting diodes to collimate the radiation from each light emitting diode into a beam,

such that each beam of radiation individually associated with each of said light emitting diodes projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the light emitting diodes merge together,

wherein the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses, and wherein each lens has an area and a center of curvature of at least one curved surface displaced from the axis of its associated light emitting diode so as to form a beam having an axis that is not parallel to said axis of said light emitting diode.

31. (Previously Presented) A lens assembly having a longitudinal axis and convex lenses each having at least one curved surface with a center of curvature at a location other than on a line parallel to said lens assembly axis and passing through the center of the area of said lens, so as to be suitable to comprise the lenses of an inspection lamp as set forth in Claim 30.

32. (Previously Presented) An inspection lamp as set forth in claim 28 having a handle.
33. (Previously Presented) An inspection lamp as set forth in claim 32 where the handle shares a longitudinal axis with the inspection lamp as a whole.
34. (Previously Presented) An inspection lamp as set forth in claim 32 where the handle does not share an axis with any other major portion of said inspection lamp.
35. (Previously Presented) An inspection lamp as set forth in claim 28 designed to accept one or more dry cells as a source of power.
36. (Previously Presented) An inspection lamp as set forth in claim 28 designed to accept power from an external power source.
37. (Previously Presented) An inspection lamp as set forth in claim 36 where the external power source is a source of direct current with a voltage of substantially 12 volts.
38. (Previously Presented) An inspection lamp as set forth in claim 36 where the external power source is a source of alternating current with a voltage of substantially 110-125 volts.
39. (Previously Presented) An inspection lamp as set forth in claim 36 where the external power source is a source of alternating current with a voltage of substantially 220-240 volts.

40. (Previously Presented) An inspection lamp as set forth in claim 28 having one or more rechargeable cells as a source of power.

41. (Previously Presented) An inspection lamp as set forth in claim 40 further having means to recharge its rechargeable cells.

42. (Previously Presented) An inspection lamp as set forth in claim 28 having dropping resistors to limit the amount of current that flows through at least one of the light emitting diodes.

43. (Previously Presented) An inspection lamp as set forth in claim 28 having non-switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

44. (Previously Presented) An inspection lamp as set forth in claim 28 having switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

45. (Previously Presented) An inspection lamp as set forth in claim 28 of such design that at least one of the light emitting diodes does not require separate means to limit or control the amount of current flowing through said light emitting diode.

46. (Previously Presented) An inspection lamp as set forth in claim 28 where the light emitting diodes differ significantly in spectral characteristics so as to cause visible fluorescence from

fluorescent substances which visibly fluoresce from the output of one or more but not all of said light emitting diodes.

47. (Previously Presented) An inspection lamp as set forth in claim 46 where at least one light emitting diode has a peak wavelength shorter than 425 nanometers and at least one light emitting diode has a peak wavelength longer than 425 nanometers.

48. (Previously Presented) An inspection lamp as set forth in claim 46 having separate switches for each type of light emitting diode comprised within said inspection lamp.

Claim 49 (Cancelled).

50. (Previously Presented) An inspection lamp as set forth in claim 28 having at least one light emitting diode with a peak wavelength less than 425 nanometers and at least one light emitting diode with a peak wavelength greater than 425 nanometers.

Claims 51-55 (Cancelled).

56. (Previously Presented) A lens adaptor, comprising:

a lens housing and a plurality of lenses, the lens housing for attachment to an LED inspection lamp with a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and each lens of the plurality of lenses is associated with a respective one of the LEDs when the lens housing is attached to the inspection

lamp to collimate the radiation from each LED into a beam, such that each beam of radiation individually associated with each of said LEDs projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the LEDs merge together,

wherein the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses, and wherein the individual beams have an angular diameter greater than any angle between any two axes of said beams, such that some area can be illuminated by all said beams at any distance from the lenses greater than distance from the lenses to the point at which the beam axes intersect.

57. (Previously Presented) A lens and LED assembly for use within a flashlight casing, the assembly comprising:

a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and a plurality of lenses, each lens of the plurality of lenses is associated with a respective one of the LEDs to collimate the radiation from each LED into a beam, such that each beam of radiation individually associated with each of said LEDs projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the LEDs merge together,

wherein the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses, and wherein the individual beams have an angular diameter greater than any angle between any two axes of said beams, such that some area can be illuminated by all said beams at any distance from the lenses greater than distance from the lenses to the point at which the beam axes intersect.

58. (Previously Presented) An inspection lamp as set forth in claim 28 where the lenses are part of a lens assembly that is movable to permit adjustment of beam characteristics.

59. (Previously Presented) An inspection lamp as set forth in claim 58 wherein the distance between the lens assembly and the light emitting diodes is adjustable so as to permit changing the distance at which beam components formed by each light emitting diode and each associated lens element are best-formed.

60. (Previously Presented) An inspection lamp as set forth in claim 58 where the LED locations can be changed to permit adjustment of the angle at which beam elements formed by each lens of the lens assembly converge towards each other.

61. (Previously Presented) An inspection lamp having:

- a. two or more light emitting diodes which produce radiation suitable for causing visible fluorescence of fluorescent materials,

- b. a plurality of lenses, a lens of the plurality of lenses forward from each of said light emitting diodes to collimate the radiation from each light emitting diode into a beam, such that each beam of radiation individually associated with each of said light emitting diodes projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the light emitting diodes merge together,

wherein the lenses are part of a lens assembly that is movable to permit adjustment of beam characteristics,

wherein the LED locations can be changed to permit adjustment of the angle at which beam components formed by each lens of the lens assembly converge towards each other, and

wherein the distance between lens centers is smaller than the distance between the centers of the light emitting diodes that the lenses are forward from so that the beam components, formed by each lens from the light emitting diode that the lens is forward from, converge towards each other.

62. (Previously Presented) An inspection lamp as set forth in claim 61 where the beam components formed by each lens from its associated light emitting diode converge towards each other so that all beam components coincide at a distance which can be changed by changing the locations of the LEDs.

63. (Previously Presented) An inspection lamp as set forth in claim 62 where the distance between the lens assembly and the light emitting diodes is adjustable so as to permit adjustment of the distance at which beam components are focused in addition to permitting adjustment of the distance at which beam elements are coinciding with each other.

64. (Previously Presented) An inspection lamp as set forth in claim 63 further incorporating means to restrict the possible adjustments to a range of adjustments where the beam elements are best-formed at the same distance forward from said inspection lamp at which said beam elements are coinciding with each other.

Claims 65-75 (Cancelled).

76. (Previously Presented) An inspection lamp as set forth in claim 30 where the lenses are comprised by a single piece of suitable transparent material.

77. (Previously Presented) An inspection lamp as set forth in claim 30 having a handle.

78. (Previously Presented) An inspection lamp as set forth in claim 77 where the handle shares a longitudinal axis with the inspection lamp as a whole.

79. (Previously Presented) An inspection lamp as set forth in claim 77 where the handle does not share an axis with any other major portion of said inspection lamp.

80. (Previously Presented) An inspection lamp as set forth in claim 30 designed to accept one or more dry cells as a source of power.

81. (Previously Presented) An inspection lamp as set forth in claim 30 designed to accept power from an external power source.

82. (Previously Presented) An inspection lamp as set forth in claim 81 where the external power source is a source of direct current with a voltage of substantially 12 volts.

83. (Previously Presented) An inspection lamp as set forth in claim 81 where the external power source is a source of alternating current with a voltage of substantially 110-125 volts.

84. (Previously Presented) An inspection lamp as set forth in claim 81 where the external power source is a source of alternating current with a voltage of substantially 220-240 volts.

85. (Previously Presented) An inspection lamp as set forth in claim 30 having one or more rechargeable cells as a source of power.

86. (Previously Presented) An inspection lamp as set forth in claim 85 further having means to recharge its rechargeable cells.

87. (Previously Presented) An inspection lamp as set forth in claim 30 having dropping resistors to limit the amount of current that flows through at least one of the light emitting diodes.

88. (Previously Presented) An inspection lamp as set forth in claim 30 having non-switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

89. (Previously Presented) An inspection lamp as set forth in claim 30 having switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

90. (Previously Presented) An inspection lamp as set forth in claim 30 of such design that at least one of the light emitting diodes does not require separate means to limit or control the amount of current flowing through said light emitting diode.

91. (Previously Presented) An inspection lamp as set forth in claim 30 where the light emitting diodes differ significantly in spectral characteristics so as to cause visible fluorescence from fluorescent substances which visibly fluoresce from the output of one or more but not all of said light emitting diodes.

92. (Previously Presented) An inspection lamp as set forth in claim 91 where at least one light emitting diode has a peak wavelength shorter than 425 nanometers and at least one light emitting diode has a peak wavelength longer than 425 nanometers.

93. (Previously Presented) An inspection lamp as set forth in claim 91 having separate switches for each type of light emitting diode comprised within said inspection lamp.

94. (Previously Presented) An inspection lamp as set forth in claim 30 having at least one light emitting diode with a peak wavelength less than 425 nanometers and at least one light emitting diode with a peak wavelength greater than 425 nanometers.

95. (Previously Presented) An inspection lamp as set forth in claim 30 where the lenses are part of a lens assembly that is movable to permit adjustment of beam characteristics.

96. (Previously Presented) An inspection lamp as set forth in claim 95 wherein the distance between the lens assembly and the light emitting diodes is adjustable so as to permit changing the distance at which beam components formed by each light emitting diode and each associated lens element are best-formed.

97. (Previously Presented) An inspection lamp as set forth in claim 95 where the LED locations can be changed to permit adjustment of the angle at which beam elements formed by each lens of the lens assembly converge towards each other.

98. (Previously Presented) A lens adaptor, comprising:

a lens housing and a plurality of lenses, the lens housing for attachment to an LED inspection lamp with a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and each lens of the plurality of lenses is associated with a respective one of the LEDs when the lens housing is attached to the inspection lamp to collimate the radiation from each LED into a beam, such that each beam of radiation individually associated with each of said LEDs projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the LEDs merge together,

wherein the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses, and

wherein the individual beams have an angular diameter greater than any angle between any two axes of said beams, such that some area can be illuminated by all said beams at any distance from the lenses greater than distance from the lenses to the point at which the beam axes intersect.

99. (Previously Presented) A lens and LED assembly for use within a flashlight casing, the assembly comprising:

a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and a plurality of lenses, each lens of the plurality of lenses is associated with a respective one of the LEDs to collimate the radiation from each LED into a beam, such that each beam of radiation individually associated with each of said LEDs projects forward from its lens and a plurality of beams of radiation simultaneously produced by a plurality of the LEDs merge together,

wherein the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses, and wherein the individual beams have an angular diameter greater than any angle between any two axes of said beams, such that some area can be illuminated by all said beams at any distance from the lenses greater than distance from the lenses to the point at which the beam axes intersect.

Claims 100-102 (Cancelled).